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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/814,714

03/31/2004

Heinz H. Busta

100067

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03/25/2008

STEVEN WESEMAN  
ASSOCIATE GENERAL COUNSEL, I.P.  
CABOT MICROELECTRONICS CORPORATION  
870 NORTH COMMONS DRIVE  
AURORA, IL 60504

EXAMINER

VIJAYAKUMAR, KALLAMBELLA M

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/25/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<p align="center"><b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b></p>	<b>Application No.</b> 10/814,714	<b>Applicant(s)</b> BUSTA ET AL.	
	<b>Examiner</b> KALLAMBELLA VIJAYAKUMAR	<b>Art Unit</b> 1793	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 05 March 2008 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
 b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
 (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
 (b) ☐ They raise the issue of new matter (see NOTE below);  
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
 5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
 6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
 The status of the claim(s) is (or will be) as follows:  
 Claim(s) allowed: none.  
 Claim(s) objected to: 22.  
 Claim(s) rejected: 1,4, 6, 7, 8, 12-16, 18, 21-22 and 25-28.  
 Claim(s) withdrawn from consideration: 29-35.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
 12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
 13. ☐ Other: \_\_\_\_\_.

/Stanley Silverman/  
 Supervisory Patent Examiner, Art Unit 1793

Continuation of 3. NOTE: The new limitation of claim-18 as amended was not part of the originally prosecuted claims, needs further search and for further consideration.

Continuation of 11. does NOT place the application in condition for allowance because: Applicants arguments filed 03/05/2008 have been fully considered, but they are not persuasive for the following reasons:

With regard to the argument that Tuck et al (WO 02/03413) does not teach the addition of silica with carbon black, teaches fumed silica with graphite, and graphite with carbon black while no rational underpinning the support the conclusion of obviousness is not persuasive (Res, Pg-7, Last line - Pg-8, Para-1), because Tuck teaches an ink composition containing conductive particles (II), insulative/resistive particles (I) and a fluid media, wherein a first minor component of electrically insulating material, either on its own or provided within a precursor therefor; and a second minor component of electrically conductive particles (Abstract). Tuck further teaches carbon black as second particle (0039, i.e. conductive particle as argued in the last office action and implied rationale for obviousness) and fumed silica/laponite (0040) as insulators. The prior art further teaches using plurality of first particles and plurality of second particles (0033). Tuck further teaches CHTR ink which is another embodiment of the Tuck's ink that contains the components of emitter coatings (0039, 0049, 0149-0152) and fumed silica/laponite as a rheology modifier, and it is printable by ink-jet or screen printing (0049, 0086-87). Further, the working examples comprise conductive graphite and insulating silica, whereby it would have been obvious to combine conductive carbon black particles with silica thus forming an ink with predictable results because prior art teaches the carbon black as conductive particles, and "[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968). With regard to viscosity, the prior art teaches controlling the rheology of the ink (0064) and printing by various techniques including ink-jet printing (0022, 0086, 0087) wherein it would have been obvious to a person of ordinary skill in the art to optimize the viscosity as a choice of design of composition and printing process that is well known in the art at the time of the disclosure of the invention by the applicants (Ma et al, US 2005/0224764, P- 0007, 0051). The inkjet inks containing conductive carbon black have a viscosity of 1-15 cps (Ma et al).

The same rationale applies to arguments over Tuck in view of Blanchet (US 5,948,465) (Res, Pg-8, Para-3). Blanchet further teaches graphite, carbon black and carbon soot preferred carbon electron emitting materials (Blanchet, Cl-2, Ln 32-36), and one of ordinary skill in the art would have substituted carbon black of Tuck with carbon soot of Blanchet as functional equivalents with predictable results.

With regard to the limitation of "adding additional carbon black if the formulation does not have desired vertical resistance" in amended claim-18 is not taught by the prior art, that needs further search and for further consideration (Res, Pg-8, Ln 6-8).

With regard to the argument that Ma teaches (US 2005/0224764), carbon-fibril inks, that teaches away from carbon black (Res, Pg-10, Para-2), Ma clearly teaches the positive addition of carbon black and graphite in to carbon-fibril-based inks (P-0119 and 0163). In response to applicant's argument that Tuck is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Tuck teaches rheology modified ink containing carbon/graphite/carbon-nanotube (P-0031; 0262) printable by screen/inkjet methods, and further teaches CHTR ink which is another embodiment of the Tuck's ink that contains the components of emitter coatings (0039, 0049, 0149-0152) and fumed silica/laponite as a rheology modifier, and it is printable by ink-jet or screen printing (0049, 0086-87); and Ma teaches conductive inks containing carbon-fibrils/graphite/carbon-black printable by screen/inkjet methods forming patterns and both the teachings have a common utility as field emission cathode materials. Further, species of polymeric binder/rheology modifier of Ma et al (0063, 0112-0116) is encompassed by the genus of rheology modifiers of Tuck et al comprising polymers, fumed silica and laponite (P0064-0070, 0040; 0152, 0267, 0275), and it would have been obvious to a person of ordinary skill in the art add fumed silica in the ink composition of Ma et al with predictable results, because both the teachings have same utility as emitter compositions. Further, addition of carbon fibrils to the instant claimed composition is not precluded by the instant claim limitation of "comprising" in claims 1 and 18.

Cancelling of claim-22 will overcome the objections to claim-22, wherein "a non-photoresist" can be any polymer that is broader than the recited polymers in claim-18.

For the reasons set forth above, applicants fail to patentably distinguish their composition and process over the prior art.

/KMV/  
March 19, 2008.